

Amendments to the Specification:

*Please replace the paragraph at page 19 beginning at line 6 with the following amended paragraph:*

Fig. 7 illustrates pairs of reactive groups (X) and (Y), and the resulting bond (XY). (A) nucleophilic substitution reactions, (B) Aromatic substitution reactions (C) transitional metal catalyzed reactions (D) addition to carbon-carbon multiple bonds (E) as in (D), but producing multifunctional compounds (F) cylcoaddition to multiple bonds (G) addition to carbon-netero multiple bonds.

*Please replace the paragraph at page 19 beginning at line 14 with the following amended paragraph:*

Fig. 8 illustrates cleavable linkers, for the formation of (A) ketones, aldehydes amides and acids (B) ketones, amides and acids (C) aldehydes and ketones (D) alcohols and acids (E) amines and alcohols (F) esters, thioesters, amides and alcohols (G) sulfonamides and alcohols (H) ketones, amines and alcohols (I) ketones, amines, alcohols and mercaptanes (J) biaryl and bihetaryl (K) benzyles, amines, anilins, alcohols and phenoles (L) mercaptanes (M) glycosides (N) aldehydes and glyoxylamides (O) aldehydes, ketones and aminoalcohols. The composition of the linker may include derivatives of the following, but is not limited hereto:

*Please insert the following new paragraphs at page 20, after line 7:*

Fig. 9 illustrates a CPN having a complementary hybridizing region 1 and a complementary hybridizing region 2 - represented by the symbols illustrated in the figure. The descriptors of CCPN 1 and CCPN 2, respectively, are indicated in the figure.

Fig. 10 illustrates a CCPN containing one hybridizing region (left panel) and a CCPN containing two hybridizing regions (right panel), respectively. Each hybridizing region is linked by a linker to a functional entity. Symbols reference different CCPN

regions as stated.

Fig. 11 illustrates a hybridization complex, wherein a CPN having a 5' call region (5'-call\*) and a 3' answer region (answer\*-3') is hybridized to each of two CCPN's carrying chemical entities to be reacted (designated BB1 and BB2, respectively). A 5' call region (call-5') and a 3' answer region (3'-answer) is indicated for each CCPN.

Fig. 11 also shows possible identifier polynucleotide sequences for CCPN's in a peptide like library composed of complementary connectors 1-7.

*Please replace the paragraph at page 41 beginning at line 18 with the following amended paragraph:*

However, in the formation of a library which both contains a mixture of highly branched, less branched and linear molecules, it is important to control, that the number and type of functional groups capable of reacting with each other match. The use of a plurality of CPN's solves this issue, by allowing only specific combinations of CCPN's in the encoding of each molecule. Each CPN thereby ensures a specific match between the number and type of needed reactions. (See Fig. 9).

*Please delete lines 25-35 of page 41.*

*Please replace the paragraph at page 42 beginning at line 13 with the following amended paragraph:*

Similarly, CCPN's may, in their hybridizing domains, specify/signal the need for specific reaction partners. (See Fig. 10).

*Please delete lines 15-25 of page 42.*

*Please replace the paragraphs at page 45, line 20-page 46 line 25 with the following amended paragraphs:*

Scaffold like CCPN's type A's: 3'-GCGCNNNNNGGCG-5' (SEQ ID NO:1).

One specific scaffold e.g. the one illustrated above could e.g. have the specific sequence: 3'-GCGCATTAGGCG-5' (SEQ ID NO:2).

Another scaffold type A, demanding the same chemistries but having another skeleton could have the specific sequence: 3'-GCGCTTAAGGCG-5' etc. (SEQ ID NO:3).

Scaffold like CCPN's type B's: 3'-AATTNNNNTAAT-5' (SEQ ID NO:4).

One specific scaffold e.g. the one illustrated above could e.g. have the specific sequence: 3'-AATTGCCGTAAT-5' (SEQ ID NO:5).

Another scaffold type A, demanding the same chemistries but having another skeleton could have the specific sequence: 3'-AATTCGGGTAAT-5' etc. (SEQ ID NO:6).

Suzuki type CCPN's: 3'-TTTTTGAGANNNNAAGGTTTTT-5' (SEQ ID NO:7).

One specific Suzuki type CCPN e.g. C1 illustrated above could e.g. have the specific sequence: 3'-TTTTTGAGATTCCAAGGTTTTT-5' (SEQ ID NO:8). Another Suzuki type CCPN could e.g. have the sequence 3'-TTTTTGAGACTTCAAGGTTTTT-5' (SEQ ID NO:9).

Acylation type CCPN's: 3'-GTTGNNNNNTTGG-5' (SEQ ID NO:10)

Alkylation type CCPN's: 3'-AACCNNNNACCA-5' (SEQ ID NO:11)

HWE/Wittig type CCPN's: 3'-TTCCNNNNCTCT-5' (SEQ ID NO:12)

CPN type 1a sequences: 3'-NNNNTCTCAAAAACGCCNNNNNGCGC-5' (SEQ ID NO:13)

One specific type of these would be 3'-GGAATCTCAAAAACGCCTAATGCGC-5' (SEQ ID NO:14) this CPN would allow the hybridization of CCPN type A and CCPN type C1. Another specific sequence would allow the hybridization of e.g. C2 instead of C1 but not C3-C7 etc.

In some settings single stranded regions may be applied to increase flexibility of the complex. This may be implemented by increasing e.g. the number of A nucleobases from 5 nucleobases

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to 7 or 10 or what is found appropriate.

CPN type 2a sequences:  
3'-TGGTNNNNGGTTCCAANNNNCAACAAAAACCTT-5' (SEQ ID NO:15)

CPN type 2b sequences: 3'-CCAANNNNCAACAAAAACCTT-5' (SEQ ID NO:16).

*Please replace the paragraph at page 49, lines 1-2 with the following amended paragraph:*

The CCPN's in a peptide like library composed of complementary connectors **1-7** could have the ~~following~~ identifier polynucleotide sequences shown in Figure 11.

*Please delete the figure at lines 3-4 of page 49.*

*Please replace the paragraphs at page 49, lines 9-15 with the following amended paragraphs:*

CCPN1: 3'-GT-GGTITITI-5' (SEQ ID NO:17)

CCPN2: 3'-TG-GGTITITI-5' (SEQ ID NO:18)

CCPN3: 3'-GTITTITI-TTTT-GGTITITI-5' (SEQ ID NO:19)

CCPN4: 3'-GTITTITI-GGGG-GGTITITI-5' (SEQ ID NO:20)

CCPN5: 3'-GTITTITI-GTGT-GGTITITI-5' (SEQ ID NO:21)

CCPN6: 3'-GTITTITI-TG-5' (SEQ ID NO:22)

CCPN7: 3'-GTITTITI-TT-5' (SEQ ID NO:23)

*Please replace the paragraph at page 49, line 27 with the following amended paragraph:*

CPN1: 3'-NN-CACAACAC-CACACACC-NN-5' (SEQ ID NO:24)

*Please replace the paragraphs at page 50, lines 14-15 with the following amended paragraphs:*

Terminator1: 3'-CACACACC-NN-5' (SEQ ID NO:25)

Terminator2: 3'-GTITTITI-NN-5' (SEQ ID NO:26)